

What is claimed is:

1. A retainer for buttressing an element subjected to forces applied substantially in one direction, the retainer comprising:  
a support;  
a plurality of members extending from the support, each member being spaced apart from the next successive member and defining an abutment surface; and wherein  
the abutment surfaces of the plurality of members defining a bearing surface adapted to engage the element when the forces are applied.
2. The retainer of claim 1 wherein the bearing surfaces and the element cooperate such that the element adopts a generally fair contour when the forces are applied.
3. The retainer of claim 2 wherein the member has an aspect ratio greater than 3.
4. The retainer of claim 2 wherein the support has a surface and the surface is part of the abutment surface.
5. The retainer of claim 1 wherein the member has an aspect ratio greater than 3.
6. The retainer of claim 5 wherein the member has an aerodynamic orientation to the support.
7. The retainer of claim 1 wherein the housing defines a hinge, the hinge defining a first and second part.
8. A method of manufacturing a retainer, the method comprising the steps of:  
providing a plate;

cutting in the plate a pattern defining a support, a plurality of  
members extending from the support, each member  
being spaced apart from the next successive member;  
each member having an abutment surface and  
rotating each member thereby aligning the abutment surfaces  
defining a bearing surface, the bearing surface being  
adapted to engage the element.

9. The method of claim 8 wherein the abutment surface cooperates with  
the element such that the element adopts a fair contour when the  
forces are applied.

10. The method of claim 8 wherein the member has an aspect ratio greater  
than 3.

11. The method of claim 10 wherein the member is rotated to an angle of  
between 60 and 120 degrees relative to the support.

12. The method of claim 8 wherein in the cutting step an offset is created  
permitting an edge of the member to align with a surface of the  
support after rotation of the member.

13. A catalytic reactor comprising:

a reactor housing having an interior and a cross-section;

a retainer comprising a support, a plurality of members extending  
from the support, each member being spaced apart from the  
next successive member and having an abutment surface, the  
abutment surfaces defining a bearing surface, the bearing  
surface being sufficient to extend substantially across a relevant  
portion of the cross-section, the retainer having a cross-section  
slightly less than the cross-section of the housing, the retainers  
positioned within the interior across the cross-section such that  
the abutment surfaces are opposed;

a catalytic element positioned between the retainers;

an inlet housing engaging the reactor housing and defining an  
impingement surface for the support of the retainer, and  
an outlet housing engaging the reactor housing and defining an  
impingement surface for the support of element.

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14. The catalytic reactor of claim 13 wherein the abutment surfaces and the  
element cooperate such that the element adopts a generally fair  
contour when the forces are applied.

10 15. The catalytic reactor of claim 14 wherein the member has an aspect  
ratio greater than 3.

16. The catalytic reactor of claim 14 wherein the support has a surface and  
the surface is part of the bearing surface.

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17. The catalytic reactor of claim 13 wherein the member has an aspect  
ratio greater than 3.

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18. The catalytic reactor of claim 16 wherein the member has an  
aerodynamic orientation to the support.

19. The catalytic reactor of claim 13 further comprising an other retainer  
positioned between the outlet housing and the elements.

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20. A retainer for buttressing an element subjected to forces applied  
substantially in one direction, the retainer comprising:

a support having a surface;

at least one member extending from the support, each member

defining an abutment surface; and wherein

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the support defines deflection means adjacent at least one member

such that the member can expand and contract independently of the  
support.

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21. The retainer of claim 20 wherein the surface and the abutment surface  
align.

22. A catalytic reactor comprising:

a reactor housing having an interior and a cross-section;

a retainer comprising a support having a surface;

at least one member extending from the support, each member

defining an abutment surface; and wherein the support defines  
deflection means adjacent at least one member such that the  
member can expand and contract independently of the support,  
the retainer having a cross-section slightly less than the cross-  
section of the housing, the retainers positioned within the  
interior across the cross-section such that the abutment surfaces  
are opposed;

a catalytic element positioned between the retainers;

an inlet housing engaging the reactor housing and defining an  
impingement surface for the support of the retainer, and  
an outlet housing engaging the reactor housing and defining an  
impingement surface for the support of element.

24. The retainer of claim 23 wherein the surface and the abutment surface align.